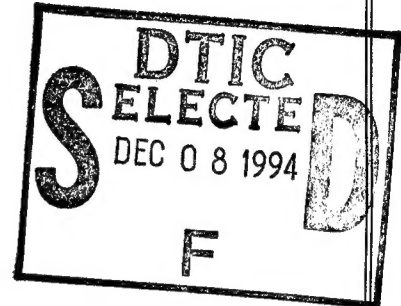


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Issues of Depot Maintenance: Changes for the Future

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RESEARCH REPORT ABSTRACT

TITLE: Issues of Depot Maintenance: Changes for the Future

AUTHOR: Glen D. Locklear, Lieutenant Colonel, USAF

The major issues surrounding Department of Defense (DoD) changes in depot maintenance are explored. Opening with early uses of contracting maintenance services by the military, we see how they came to be increasingly relied upon during the Berlin Airlift. Next, current topics internal to DoD depot maintenance are reviewed. The issue of excess capacity, is followed by depot core maintenance, Base Realignment and Closure (BRAC), and competition. This section concludes with Service concerns. Next addressed are external factors that impact DoD such as the Congress, and the private industrial sector. After reviewing the options available, the paper concludes with recommendations for the Services and the DoD to come to consensus on depot consolidation and with legislative assistance, offer more depot workload to the private sector.

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. . . if there is a better way to do it or if there's something that the federal government is doing, it should stop doing, we'll try to make the changes needed.

President Bill Clinton¹

INTRODUCTION

Many argue that the federal government should stop competing with private industry in the performance of depot maintenance on major systems such as ships and aircraft. As Grumman Chairman and Chief Executive Officer Renso L. Caporali says, ". . . it's not real competition."² While the work performed is on the military service's own equipment, and the Services clearly have the capability to do the work, many in private industry are of the opinion that they could do the same job at less cost to the taxpayer. Some, not all, members of the Services disagree. Who's right? Or is there a better solution to satisfy both industry and the Services? Just what are the options?

This paper will address the issues that surround depot maintenance today, keying on issues internal to the Department of Defense (DoD), that they control. After some background history about contracting depot services, I will launch into the internal issues of the DoD and the Services such as excess capacity, depot core, Base Realignment and Closure (BRAC), Competition, and Consolidation. Next I will address external issues such as political drivers, congressional guidance, and the role and perspective of private industry. Before I conclude, I will review the options available to the DoD and then make

recommendations.

One thought needs to be added up front. My own experience is with the U.S. Air Force. If this paper seems to lean too heavily on Air Force examples, it's because of my own background and personal knowledge which I rely on.

NEED FOR CHANGE

Clearly the demise of the Soviet Union and the threat embodied led to an almost audible shift from defense to economic tools as the key to the national security of the United States. But just as the Soviet threat evaporated, so too did thousands of defense related jobs across the nation. Today, following the administrations theme of **Reinventing Government**, there is a growing demand for change in the way the Federal government operates. A campaign promise of the presidential candidate Bill Clinton was to reduce the size of the federal infrastructure and reduce the number of employees on the payroll. After President Clinton established the National Performance Review to improve performance in government, one of the nearly 400 recommendations offered was to increase government competition with the private sector. As the report stated, "In a time of scarce public resources, we can no longer afford so many service monopolies."³

Contracting out or privatizing depot maintenance meets that objective, but is there a cost associated? Not just in terms of dollars, but in terms of readiness. Before considering this or any proposal we need to address a few realities.

THE FEDERAL DEFICIT AND BUDGET DECLINE

Scarce resources have driven a reduced defense budget. But as noted earlier, with the demise of the Soviet bloc, there is no foreseeable threat to defend against. Now the federal deficit and other domestic issues have the attention of our national leaders. It's in this era of declining defense dollars and decreasing major system acquisitions, the commercial defense industrial community has hungrily eyed the depot workload as a possible job source to replace the dwindling defense production lines. With total force drawdown, Service Life Extension Program (SLEP), modifications, and other system enhancements will be needed to extend weapon system field life. This work will be the primary source of modernization and upgrade. It is the jobs that are tied to this work that is at the heart of the debate. Who should perform the work? Public or private industry? Organic or contract? Civilian or military? Perhaps a mixture?

ROLE OF PUBLIC DEPOTS

The DoD has been accused of competing with the private sector in an area critical to national security and the support of the Armed Services --- depot maintenance. So why the need for organic depot maintenance? In no particular order a few reasons are proffered: 1) They provide a rapid response in time of crisis or war. 2) As a source of battle damage repair, depot repair teams can be rapidly deployed in-theater. 3) They provide support for older systems when no private source is available. 4) They serve as a cost effective alternative source of repair.

And certainly the Services have many other supporting justifications.

Today there are thirty-three organic maintenance depots⁴ that provide the Services their own support for readiness, sustainability, and mobilization. This has become no small matter of importance to the commercial defense industry and the Services alike. They are both in competition for the same workload. Like a web with many strands and connections, depot maintenance has myriad issues that connect or turn in several different directions. At the very center of the problem - - - or so it seems - - - is the issue of jobs or employment, *not* national security. To understand the magnitude of this issue, realize that the Defense Departments depot maintenance effort is responsible for 400 ships, 1400 other watercraft, 36,000 combat vehicles, and over 663,000 wheeled vehicles. Add the 20,000 aircraft of nearly 100 types, and the depot structure is better appreciated. This is a business that employs more than 117,000 people, of which 99% are civilian, and had a budget of almost \$13 billion in FY93⁵. Putting it in perspective, if ranking the total DoD depot structure, the industrial strength and budget it wields would place it in the top 30 of the Fortune 500. There is a good reason the public depots receive plenty of congressional attention.

This conflict over sources of repair for depot maintenance has been festering for some time. To properly frame the problem the historical perspective must be first addressed.

HISTORY

EARLY USES OF CONTRACTING SERVICES

History is replete with examples of contractors providing war-critical services and commodities to the U.S. military. Munitions is just one example.

In Air Force vernacular, to fight the battles of war, bombs on target is the objective. Provisioning for munitions is critical to the readiness of the forces and the final outcome of conflict. So munitions sources are critical. Prior to 1930, the military depended on the Army for Government-Owned /Government-Operated (GOGO) arsenals for most munitions products. But during and since WWII there has been a transition in the armaments industry from public to private sector, Government-Owned/Contract-Operated (GOCO) plants.⁶ There was not and has not been a lack of confidence in contractors performing war-critical skills in the munitions industry.

A later example came about in 1948 with aircraft depot maintenance. Contracts were first used when the maintenance backlog was so great that it exceeded the depots capacity, and threatened support of the Berlin Airlift. Air Material Command proposed and began using commercial sources engaged in the overhaul of aircraft.⁷ By 1950, policy was established to contract out depot maintenance if the following criteria were met:

- (1) Funds were available;
- (2) Merit of the contract was established;
- (3) The civilian organization was well suited and qualified;

- (4) Civilians could do the work faster;
- (5) Support of combat units was not endangered;
- (6) Flexibility of the organic depot was not threatened. ⁸

The depot surge continued through the Korean War and the escalation of the cold war. Within the Air Force as the number of active wings grew from 55 to 143, depot maintenance had to be accomplished by contractors to avoid the backlog that would accompany the buildup. While the public/private debate continued with the buildup, use of private contractors to perform depot maintenance became an essential part of Air Force aircraft support strategy. By 1959, an Air War College paper on contracting of aircraft maintenance remarked on the upward trend of contractor support.⁹ It was obvious that contractors were providing services equal or comparable in quality to the Military Services. But it was equally clear that they were competition to the public depots.

EXPANDED USE OF CONTRACTOR SERVICES AND A-76

Depot maintenance was not the only work performed by contractors. Critical services to installation support such as telephone and communications operations, fire protection, and facilities and grounds maintenance were long performed by contractors. A key determining factor for deciding to use a contractor over federal employees was our wartime mobility requirements. As the aforementioned and other base support services would not deploy with a mobilization, the issue of retaining the in-house capability was questioned. When OMB

Circular A-76, *Performance of Commercial Activities*, was issued in 1983, distinct guidance was provided on what could and could not be contracted out. The circular established

. . . Federal policy regarding the performance of commercial activities. The Supplement to the Circular sets forth procedures for determining whether commercial activities should be performed under contract with commercial sources or in-house using Government facilities and personnel.¹⁰

Essentially it directed government agencies to use the private sector for its commercial products and services as long as it was more economical than having the work performed by the government.

TASKING TO THE ARMED SERVICES

In the Air Force, two flying training wings had been using contractor aircraft maintenance since as early as 1960. Because these functions had no wartime tasking, the A-76 circular gave question to the remainder of the maintenance being performed by government personnel in Air Training Command (ATC). In 1986, ATC was directed by Headquarters United States Air Force to conduct cost comparison studies of aircraft and equipment maintenance throughout the command. Subsequently between 1975 and 1988, 100 out of 146 functions studied were changed to civilian positions.¹¹ Placing the jobs out for bid was no guarantee that a private contractor would get the job. In many instances the civilian employees proposed a most efficient organization (MEO) to compete for the contract, and in a few cases won. But the direction was established. Contracting for non-warfighting services became an acceptable way of doing business.

Similar processes occurred in the other Services. Keying on non-wartime fighting skills, support for transient aircraft maintenance was contracted in the Army and Navy as well as the Air Force.

Within the Navy and the Marine Corps another criteria, shore-duty billets, became an important factor. Regulation required a rotation of sea and shore duty assignments for personnel. For the Navy and Marine maintenance personnel, contracting out the maintenance meant that there would be fewer shore-duty assignments available than personnel to fill them. To keep a steady source of personnel, the Navy and Marines had to keep their sources of repair in uniform.

But though the Services were tasked to make available their non-warfighting maintenance skills for contract, depot maintenance was identified as war-time critical thus necessary to be retained by the military services. That view has not been shared by the commercial defense industrial community of late. Lets review the current situation for the issues internal to DoD that impact the private sector and how both respond.

INTERNAL DOD ISSUES

EXCESS DEPOT CAPACITY

The Services have acknowledged the too much depot capacity. As they have become smaller, and their requirements have declined, true capacity, i.e., plant, equipment, manpower, and time have been reduced, but not enough to match the reduction in mission requirement. The gap between requirement and capacity increases as mission needs decrease. The end result is the Services have more capacity than needed. Yesterday's 90 percent capacity is 150 or 160 percent today because of the dramatic shift in requirements.

In the *Depot Maintenance Consolidation Study*, a group of retired senior military officers and executives from private industry joined to review the areas within the DoD depots that could be consolidated. In concluding their report they noted first, that depending upon Service, and then, whether the future was forecast against the Defense Depot Maintenance Council (DDMC) FY92-FY97 Corporate Business Plan or simply using the FY87 capacity against the FY95 workload, the over capacity ranged from ten percent up to forty-four percent.¹² But the Services aren't the only ones with the excess; industry has the same problem. Former Deputy Assistant Secretary of Defense for Production Resources, Nicolas M. Torelli, Jr acknowledged that while private industry has more overcapacity than the Services, "If that capability already exists in the private sector, you have duplicated the costs that industry [and ultimately the

government] has already paid for."¹³

So if the capability is being duplicated by private industry, why the Services concern with reduction? The answer is in Title 10 of the United States Code (USC). It tasks the DoD and Services with a timely response to national mobilization or other emergency call up. Not owning the manpower yet being held responsible would be disconcerting, especially if the skill had been within the Service, and was lost. To prevent this from happening, the Services have made a concerted effort to keep their depots fully utilized for a number of reasons. First, there is a need for a solid, trained, and experienced depot maintenance workforce. Next, these skills take a long time to develop; once lost, it would take years to recapture that capability. Finally, if called upon for a national mobilization there would be no time to hire and train the personnel required to support a full surge; it would be too late.

The Air Force has approached the problem from a different angle. Traditionally, maintenance is considered one of three types: Organizational (O) which is at the lowest level, and is performed by the aircraft crew chief; Intermediate (I) is at the shop or off the primary equipment; and Depot (D) level, which is major repair or overhaul which has to be accomplished at a specific site for that component or weapon system. Beginning in FY-94 the Air Force has moved to two level maintenance relying largely on "O" and "D" level work for avionics and aircraft engine repairs.

Closing a number of its "I" level shops, the A.F. now sends the avionics and engine work directly to the depot from the flightline. Ostensibly, this saves time, dollars, and gets the weapons system fully functional quicker. Unstated is that it also keeps jobs at the depots. Since the Service has given up a good share of its intermediate capability and now is relying on the depot level repair, it has raised the value of depot level and has made it even more essential to mission accomplishment. In short, two level maintenance while providing a more efficient Wing, also supports depot maintenance workload, and may absorb some of that excess capacity.

Upon review, when considering other factors that impact excess capacity, a single item stands above all other issues and needs to be included in the discussion. The matter of depot core maintenance.

DEPOT CORE MAINTENANCE

No small part of the public versus private depot debate has revolved around the issue and definition of depot core maintenance. Why? Because core defines what must be maintained by the Services, and is supported by statute as seen earlier. DoD and the Services have interpreted Title 10 to mean that they must have the organic capability to provide the warfighters with the equipment they need at a moments notice; and this can only be done by the military controlling the depots. Non-core work has never been at issue; it has always been available for contractor bid.

For the Services, the larger the core, the larger the organic workload. For a time the definition of core maintenance was being debated by all the Services. But in 1992, the Office of the Secretary of Defense (OSD) staff published this definition of core maintenance:

An integral part of a depot maintenance skill that shall be maintained within depot activities to meet contingency requirements. CORE will comprise only a minimum level of mission-essential capability and must be under the control of an assigned individual DoD Component or may be a consolidated capability under the control of an assigned or jointly determined DoD Component where economic and strategic considerations warrant.¹⁴

The problem is that while this definition tells the reader what core will be, but it doesn't say how much of the "minimum level of mission-essential equipment" must be repaired organically. Is 100 percent the right amount for organic repair? The Air Force acquisition chief, Lt Gen John Jaquish, thinks that sixty percent core (as the governments depot workshare) is too high. The Navy's strategy center around maintaining minimum core capabilities, and contracting out the rest.¹⁵

The core methodology should be quantified and should center around wartime requirements. This would tell the depot exactly what their repair requirement was so they maintain a consistent organic workload. As defined, the manpower requirement to support core could go over the personnel threshold authorized by Congress for the DoD. Core maintenance is the foundation of the organic depot maintenance capability, and as such needs to provide a definition that cannot be interpreted by each Service

to meet their own desires; it must be clearly DoD policy.

As issues that impact DoD depot policy are reviewed, none create the interest shown the next subject: base closure.

IMPACT OF BASE REALIGNMENT AND CLOSURE (BRAC)

A spinoff of the smaller defense was the realization that the DoD had too many military installations for the reduce force structure. Though the first BRAC committee list was released in 1988 prior to the dissolution of the Warsaw Pact, the message was clear that the Services had to get smaller. Consequently, the number of major (400+ personnel) maintenance depots has gone from thirty-five in 1988, down to a projected twenty-four by 1999 as a result of the 1991 and 1993 BRAC recommendations.

In many cases, the depot is the single largest employer in the state, so a closure can have dramatic repercussions across the region. While attempting to keep only the most efficient depots operable, political realities have made it difficult to close some facilities. For example, in the 1993 BRAC recommendation list, the Air Force's Sacramento Air Logistics Center (SM-ALC) was targeted for closure. California had already closed or was in the process of closing four bases: Mather AFB, Castle AFB, Beale AFB, and Sacramento Army Depot. The 1993 list proposed Fort Ord, Mare Island Naval Ship Yard, Navy Depot Alameda, and SM-ALC. If the recommendation was approved, eight northern California installations within a 200 mile radius would have closed within an eleven year period (1988-1999). The

recommendation to close SM-ALC was not on the list forwarded to Congress by the Secretary of Defense or the BRAC commission. Other political issues will be addressed later.

As the primary tool being used by the DoD to determine which installations remain open, BRAC can also be used to downsize or consolidate the DoD depots. Using competition within the Services to determine the most effective and efficient organizations would make the BRAC decisionmaking process easier and more objective. To consider this, lets take a deeper look at competition.

COMPETITION AS A TOOL

"Competition Must Reign," shouted the headline of the *Defense News* Commentary article authored by the Commander of U.S. Air Force Materiel Command, General Ronald Yates. "Maintenance and repair work should not simply be given to [private]industry , but made available through competition."¹⁶ But industry isn't the only competition. For the defense depots, there are four possible types of competition.

The first two are public versus public competition. This can be within one Service such as an Army depot competing with another Army depot (intraservicing), or between Services (interservicing). Next is public sector versus private sector competition, and the last type is private versus private.

The purpose of competition is to give the Services the best possible depot maintenance at the lowest price. But price isn't the only consideration. Vice Admiral William Bowes, Commander of

the Naval Air Systems Command commented that "the Navy will be looking for "best value in terms of schedule, quality and cost."¹⁷

But it helps. According to the Naval Air Systems Command Deputy Assistant Commander for Aviation depots, Capt. Robert Jordan, "competition has yielded a 20 percent reduction in cost over the last several years."¹⁸ Clearly the right direction in this fiscally restrained environment.

Based solely on competition, the Air Force would most likely keep all their depots open. The 1993 BRAC chairman concluded that when comparing depots, "the worst of the Air Force depots are among the best of all in the DOD."¹⁹ And that appears to be the goal of General Yates, to provide the best, most competitive depots in the DoD, which ensures workload, and jobs. By bidding on and winning a Navy F-18 depot maintenance contract, the Air Force demonstrated support for inter-service competition, but to make the other Services more comfortable with the aggressive Air Force contracting policy, there must be some reciprocity demonstrated. In a level playing field, that may be difficult.

Though private industry wants and has bid on much of the DoD depot workload, they won only thirty-six percent of the contract awards; but the private sector is limited by law to only forty percent of the total depot work available.²⁰ According to General Yates, "Many defense companies are very competitive with government depot prices, often winning or coming within 10% of the depot's price. However, they are not original equipment

manufacturers, or what you would call prime contractors."²¹

Rather these companies specialize in modification and repair work. If the Air Force closed all its depots and decided to offer all the work to private industry...it would [go to] the mod and repair houses.²²

This scenario is constantly changing, but current law restricts the amount of depot workload that may be contracted out to a private contractor. When Congress limited that amount to forty percent of the total annual workload, they consequently limited true competition. Before moving to issues such as Congress, let's review the Services concerns on contracting out.

SERVICE CONCERNS

Each Service provides a different spin on the issue and the best solution for their own depot maintenance needs. Even within the Services the debate rages as witnessed by the divergent views at the four star level. Air Force Vice Chief of Staff, General Michael Carns told the *Wall Street Journal*, that he favors shifting a major share of depot maintenance to the private sector.²³ A week later, also published in the *Wall Street Journal*, General Yates disagreed.²⁴ He thinks giving private business more depot workload will not preserve the skills needed to produce a new combat aircraft which appears to be industry's intent. "There is a fundamentally different talent between a guy who designs a wing planform and a guy who designs a patch to a wing planform."²⁵

Another concern is the mobilization support required for the

Services. Our success in contingency operations is in no small measure attributable to the existence of and support provided by the flexible, responsive, and technologically proficient organic depot maintenance base.²⁶ Given up, there is apprehension that the private sector couldn't respond.

Like the Navy, the Air Force wants best value even if competed between public and private industry. Having reviewed the influences internal to the DoD, lets now turn our attention to the external influences that impact depot maintenance.

EXTERNAL ISSUES

POLITICAL IMPACT

Defense depots operate on thirty-three major installations in nineteen states. According to the Vickie Plunkett, military affairs aide to Congressman Glen Browder (D-Ala), Chairman of the Depot Caucus, depots cover ninety congressional districts across the country.²⁷ In terms of political clout, that translates into thirty-eight U.S. Senators and ninety members of the House of Representatives. But as powerful as they may be, they too have constraints to work within.

Back in a July 1992 interview, Congressman Dave McCurdy (D-Ok) said, "I think we are setting ourselves up for a fall. There are going to be cuts, sooner or later. We need to prepare for that, and I think we need a rational plan for how we get there."²⁸ Almost two years later, in a letter to the Secretary of Defense dated January 20, 1994 and signed by eight members of Congress, the DoD was asked to begin preparing for the '95 BRAC commission, and to give the Services "early and clear direction" to plan for the depot closures. Solidly in favor of interservicing, the letter repeated an previous report stating, "[consider]. . . interservicing options to achieve the greatest cost-savings and maximum use of the most efficient facilities." It continued, "Increasing competition between public depot maintenance facilities (interservicing) and between public and private maintenance organizations is, in the Committee's view, the key to eliminating excess capacity."²⁹

As noted earlier, depots mean jobs, and it is difficult for a congressman to go back to their district and say, "We're closing your base and now you're out of a job." But even Congress understands that with the defense drawdown, some of the over capacity has to be eliminated. As McCurdy said, we need to develop a transition policy that can mitigate the impact on individuals, both in the military and in defense jobs.³⁰

CONGRESSIONAL GUIDANCE

The National Defense Authorization Act of 1992 directed that the Army and Air Force would perform at least 60% of all depot maintenance organically; the Navy was added in 1993. The remaining 40% contractors could bid on. This didn't sit well with the private defense industry but then, the depot maintenance workload wasn't something that they had been actively pursuing. Agreeing that the 60/40 workload split between public and private depots was artificial, Rep. Glen Browder successfully argued that the military services should retain a core capability within government depots.³¹

The DOD and Congress have yet to reach consensus on public and private depot requirements. As a result, in the 1994 Defense Appropriations Act, Congress directed the DOD to review the depot structure, and to do these nine tasks:

The Secretary of Defense shall appoint a task force to assess the depot-level activities of the Department of Defense. The assessment shall include:

(1) Identification of the depot-level maintenance workloads that were performed from 1990 until 1993 for the military departments by DoD and non-DoD government

personnel.

(2) An estimate of the current depot capacity to carry out the performance of depot-level maintenance.

(3) The rationale used by the DoD to support a decision to perform depot maintenance by DoD or by non-federal government personnel.

(4) An evaluation of the cost, manner, and quality of performance of the depot maintenance workload by DoD and by non-Federal Government personnel.

(5) An evaluation of the determining requirements for core depot-level maintenance performed by DoD employees.

(6) A comparison of the methods by which the rates and prices for depot-level maintenance workloads performed by DoD employees are determined, with the same methods used by non-Federal government personnel.

(7) A discussion of the issues involved in the assignment of organic depot-level maintenance workloads and the assignment by non-Federal Government personnel, including the preservation of surge capabilities and mobilization of essential industrial base capabilities.

(8) Identification of the depot-level functions suitable for DoD employees and the same functions that are suitable for non-Federal Government personnel.

(9) Identification of the optimal DoD depot-level maintenance organization, structure and resource allocation. ³²

This is not unlike the direction the Services was given to perform A-76 studies on their support structures. Congress, by asking some pointed questions has essentially told the DoD which direction they are looking. If the DoD and services do not act for themselves to remedy the excess capacity problem, it may be legislated for them.

PRIVATE SECTOR PERSPECTIVE

As already noted, the private sector doesn't think that the current manner depot workloads are being competed is real competition. Private defense industry and the groups that represent them such as the Aerospace Industries Association, have rallied to Congress, industry newsletters and magazines, and to

the DoD and the Services. As aptly stated in a January 1993 issue of *Aviation Week and Space Technology*, "The issue of the military moving toward an arsenal system is coming to fore as industry and government officials worry about whether private or public facilities will be closed -- with the government controlling the decisions."³³ In the past, original equipment contractors didn't bid on depot workload, but in a world where survival of the fittest is more than just a phrase, it can mean the future of the company. Defense industry spokesman Don Fuqua, head of the Aerospace Industries Association (AIA) thinks the private versus public depot maintenance competition is out of balance, as does Renso L. Caporali, the President of Grumman. Caporali said, "Risks faced by industry appear to be entirely missing the public sector, and there is no way to account for this in the bidding process."³⁴

While many in private industry look warily at the Services, there are those who agree with some of their ideas and methods. "Dan A. Colussey, president and CEO of UNC, Inc., agreed with General Ron Yates during panel discussions that the massive transfer of depot work to original equipment manufacturers was not the answer." His proposal was to have government-owned contractor-operated (GOCO) depots perform vital core maintenance work with the rest being farmed out for competitive bid to private industry, which would perform the work in existing government depots. Colussey's proposal also responds to the political pressure within Congress to hold jobs in districts

where the depots now exist.³⁵ But if the government is trying to close facilities, and contractors have excess capacity that they would prefer to use, GOCO is not the right option.

A major irritant to the private sector is in the government cost accounting when building a proposal to perform depot maintenance. The concern is that they are not operating on a level playing field, as its accounting gives different -- and higher -- costs than those calculated by the government. Lets go over the major concerns.

DIFFERENCES IN ACCOUNTING

Warren Balish, Director of Product Support for the AIA, said, "We aren't looking for dramatic changes; we just want to feel that we have an even chance of winning a contract. Today we don't feel that way."³⁶

The specific area of concern revolves around the cost of overhead, which must be bid in a private contract, but is not included in government bids. This includes taxes, retirement, medical benefits, and of course, profit.³⁷ The government isn't held to the same accounting standard as private industry, so industry bears the burden. These difference have not gone unnoticed by the General Accounting Office (GAO). It questioned the Air Force's accounting and billing practices which made it hard for Congress to it provide oversight, and gave a inaccurate picture of their performance.³⁸

In view of the many internal and external influences on the

issues of DoD depot maintenance, what are the alternatives to providing the Services the best total value. What is available?

OPTIONS AVAILABLE

When reviewing options available to reduce the depot infrastructure, we must first identify the goal. As stated previously, the desired end state is to reduce the depot excess capacity which will in turn reduce depot expenses. This must be done with minimal impact on readiness, and any change in depot support should be transparent to the field. So stated, what are the tools needed to achieve this end?

Looking at extremes, at one end of the spectrum is the total privatization of the DoD depot maintenance workload. At the other end is the total nationalization of the aerospace industry - - - at least as viewed by the AIA. Somewhere between these two extremes is what is needed meet depot maintenance requirements. Here are some alternatives.

- 1) Competition is an option favored by the Services as well as by industry. At issue is what should be competed. The total workload, or only that non-core work available?
- 2) In the Defense Depot Maintenance Council (DDMC) Corporate Business Plan, the DDMC intends to attain future savings by streamlining and restructuring the existing infrastructure. Streamlining would include: a) Downsizing direct depot workforce; b) Downsizing indirect depot labor; c) Close facilities d) Cancellation of facility projects; e) Intra-service workload consolidation. Their plan for restructuring includes: a) Greater utilization of capacity; b) Interservice support; c) Increased

competition between the Services and with private industry.
Applied over time, all are attainable goals.

3) Establish a DoD Core around joint capability and Service requirements versus the DoD Core. In supporting jointness, depot commanders and deputies could be from services other than the host.

4) Consider using a GOCO depot. Service would still maintain control over the facility and drive requirements. Prior to 1930, the military depended on the government arsenal for most armament products. Since then a shift has occurred from public to private sector with the government owning the plants.³⁹ Teaming contractor to the government might be an alternative.

5) Using competition as the driver, remove the depots from the BRAC process. Instead tell the depots that their remaining open depends on their productivity. Establish the baseline, get approval from Congress, then three years later, review results and make the closure decisions.⁴⁰

RECOMMENDATION

The task of reducing depot infrastructure and over capacity is complex and clearly political, so I would propose an iterative process using some selective pieces of the options identified. The goal would be to accomplish the stated objective in four years (within a single administration) using the following list as a guide for OSD and the Services to focus on:

- 1) Determine which depots are the most competitive in the DoD and use. If Service ownership becomes an issue, consider changing the owning service.
- 2) Quantify core requirements and capabilities at OSD level, and use as the standard for all Services.
- 3) Eliminate duplication of repair capability. Keep at least the basic skills to repair all components declared to be core.
- 4) Use "just in time" maintenance for depot production.
- 5) Learn and use lean logistics procedures which will allow the services to keep only the capabilities necessary to ensure no loss in readiness and sustainability -- goal is better or equal metrics. Current examples are two Air Force programs, two level maintenance and the termination of LOGAIR as the primary mover of logistics parts for the depots, for Federal Express.
- 6) Advocate before Congress:
 - a) Either support the efficiencies planned and close the depots recommended, or be willing to pay for the existing and continuing inefficiencies.
 - b) Let competition drive source of repair, not a 60/40 rule.

CONCLUSION

MUST CHANGE OUR THINKING

When thinking of DoD depots, the decision makers must rise above parochial thinking within the Services. We need to make radical changes to our thinking about our depot capabilities. As we reinvent the government, it's time to rethink the way we accomplish depot maintenance. We must reinvent and re-engineer the process, not just reduce. We must put our minds on a level that is thinking ahead thirty or forty years to 2020 or 2030. What do we want the organic industrial structure to look like? We must think Third Wave technology and prepare our people and facilities for it. Its time to redesign the depot structure from the monolithic titan it has been for the last forty years to a lean and agile facility using smaller production cells as needed, not an entire costly depot complex.

It is also time for depots to be viewed as national resources, not unlike the national laboratories of the Department of Energy. After passage of the 1986 Federal Technology Transfer Act, "more than 800 cooperative research and development agreements (CRADAS) were established between the lab complex (including all labs, not just those in the nuclear weapons complex) and private businesses"...⁴¹ Why not public and private sector depots?

CONTRACTORS AND THE PRIVATIZATION OF DEPOTS

We have used contractors to perform depot maintenance in past and we will continue. They deployed during Desert Shield

/Desert Storm, so the mobilization fear is false. We have contractors supporting flying mission today - - - non-warfighting units. The mission is being performed with satisfactory aircraft in-commission rates. If we use competition properly, the privatization problem will fade.

We have reviewed the issues surrounding change in DoD depot maintenance. Many of the issues such as the definition of core depot maintenance can be resolved within the DoD. Others such as the 60/40 workload split must be changed by legislation.

The bottom line is regardless of where the work is performed, by contractor or by Service, we must ensure the best value to the government is received. Now is the time for the Services and OSD to come to consensus on depot workload; if they don't , it may very well be legislated for them. As noted in a 1991 Office of Technology Assessment:

Since military weapons systems will likely remain in inventory longer than in the past, maintenance will become more important. The shift from the urgent production and deployment of new systems during the cold war era to the overhaul, remanufacturing, and upgrading of deployed systems over the coming decades will have important implications for the reexamination of the mix between public and private sector.⁴²

Now is the time for OSD and the Services to make the hard decisions.

ENDNOTES

1. Gore, Al, Creating a Government that Works Better and Costs Less: Report of the National Performance Review, Washington, D.C., September 7, 1993, 97.
2. Velocci, Jr., Anthony L., "Executives Assail Impact of Depots on Industrial Bases," Aviation Week & Space Technology, June 21, 1993, 70.
3. Ibid, 58.
4. Throughout this paper the terms defense, Service, public, government, and organic refer to the depot owned and operated by the federal government. Conversely commercial, contractor, private, contracted-out, and outsourcing all refer to a privately owned and operated depot facility.
5. Assistant Secretary of Defense, Defense Depot Maintenance Council Corporate Business Plan Fiscal Years 1992 - 1997, Washington D. C.: 1993, 6.
6. National Defense University, Industrial College of the Armed Forces, Industry Studies Reports, Academic Year 1992-1993, 5-11.
7. Lee, Colonel Robert E., USAF. "Contractor versus Depot Maintenance of Weapon Systems." Research Report, Air War College, Maxwell AFB, AL, Apr 1959, 8-9.
8. Smith, Robert A., III. The Development of Air Logistics Doctrine 1948- 1956. Mobile Air Materiel Area, Brookley AFB, AL., 1 Apr 1957, 117.
9. Lee, 9.
10. Performance of Commercial Activities, Office of Management and Budget Circular A-76. Washington Government Printing Office, August 1983,1.
11. Hamlin, Lieutenant Colonel Mary B., USAF. "Privatization of Aircraft Maintenance: Maximizing Contract Effectiveness." Research Report, Air War College, Maxwell AFB, AL, May 1990, 6.
12. Went, General J. J., USMC (Ret), et al., Depot Maintenance Consolidation Study, Office of the Joint Chiefs of Staff, Washington, D.C., 1993, V-2.

13. Morrocco, John D., "Depot Work Called No Salvation for Industry Design Teams," Aviation Week & Space Technology, Nov 1, 1993, 32.
14. Department of Defense Directive (DoDD) 4151.18, Maintenance of Military Materiel, August 1992.
15. Boatman, John, "Industry Eyes Depot Work," Jane's Defence Weekly, Vol. 20, No. 4, 24 July 1993, 29.
16. Yates, General Ronald, "Competition Must Reign," Defense News, Jan 24, 1994, 24.
17. Morrocco, John D., "Navy Shifting Depot Work to Private Industry," Aviation Week & Space Technology, Jun 28, 1993, 29.
18. Navy Times, "Struggle in the Depots," April 5, 1993, 40.
19. U.S. Air Force, Air Force White Paper, "Air Force Strategy Provides Highest-Quality, Affordable Depot Maintenance," November 1993, 4.
20. Weinschenk, Andrew, "Industry Won Half Of Pentagon Depot Competitions Last Year," Defense Week, Jan 18, 1994, 8.
21. Morrocco, Aviation Week & Space Technology, Nov 1, 1993, 32.
22. Ibid, 32.
23. Ricks, Thomas E., "Air Force's No.2 Officer Proposes Shift of Maintenance Work to Private Sector," Wall Street Journal, Jul 7, 1993, A4.
24. Cole, Jeff, "Two Air Force Generals Joust Over U.S. Work," Wall Street Journal, Jul 14, 1993, A3.
25. Morrocco, Aviation Week & Space Technology, Nov 1, 1993, 32.
26. Mondl, Lieutenant Colonel Mark C., "News You Can Use - No. 2," Maxwell AFB, Al, Aug 16, 1993, 4. (Newsletter of the A.F. Materiel Command Chair at the Air War College)
27. Telecon with Vickie Plunkett, 5 April 1994.
28. Tapscott, Mark, "Time to Prepare for Transition," Defense Electronics, July 1992, 20.
29. Information in a letter signed by Vic Fazio, et al to The Honorable Les Aspin, Jan 20, 1994.
30. Tapscott, 21.

31. Morrocco, Aviation Week & Space Technology, Nov 1, 1993, 32.
32. U.S House of Representatives. Committee on Armed Services. National Defense Authorization Act for Fiscal Year 1994. 103rd Cong., 1st sess., 1993. Conference Report to accompany H.R. 2401.
33. Dornheim, Michael A., "Uneven Playing Field Hampers Public-Private Competition," Aviation Week & Space Technology, Jan 18, 1993, 50.
34. Velocci, 70.
35. Morrocco, Aviation Week & Space Technology, Nov 1, 1993, 32.
36. Balish, Warren N., Personal Interview. January 26, 1994.
37. Dornheim, Michael A., Aviation Week & Space Technology, Jan 18, 1993, 51.
38. Dornheim, Michael A., "GAO, Air Force Differ on Depot Accounting," Aviation Week & Space Technology, 25 Jan 1993, 66.
39. ICAF Industry Studies, Academic Year 1992-93, p. 5-10.
40. This idea is based roughly on a answer given by the Air Force Vice Chief of Staff, General Carns, to the Air Force students during a visit to the Industrial College of the Armed Forces on March 9, 1994.
41. ICAF Industry Studies, Academic Year 1992-93, p. 3-7.
42. Office of Technology Assessment, Redesigning Defense: Planning the Transition to the Future U.S. Defense Industrial Base. Washington, D.C.: U.S. GPO, 1991.

BIBLIOGRAPHY

- Aerospace Industries Association (AIA), "Background Paper on Depot Level Maintenance." Unpublished paper.
- Aspin, Les. 1994 Annual Report to the President and Congress. Washington D.C.: U.S. Government Printing Office (GPO), 1994.
- Assistant Secretary of Defense, Defense Depot Maintenance Council Corporate Business Plan Fiscal Years 1992 - 1997. Washington D.C.: U.S. GPO, 1993.
- Balish, Warren N., AIA Letter to OASD(P&L)-L/MP with Position Papers on Depot Maintenance/Industrial Base Issues, June 17, 1993.
- . AIA Letter to OASD(P&L)-L/MP with Position Papers on DOD "Core" Depot Maintenance Policy, June 25, 1993.
- . Personal Interview. January 26, 1994.
- Boatman, John, "Industry Eyes Depot Work," Jane's Defence Weekly, Vol. 20, No. 4, 24 July 1993, pp. 28-29.
- Borrus, Ann, "It's Going to be a Real Dogfight," Business Week, Dec 28, 1992, 42A.
- Clark, Rolf H. "The Dynamics of Force Reduction and Reconstitution," Defense Analysis, Vol 9. No 1. (1993) pp. 51-68.
- Cole, Jeff, "Two Air Force Generals Joust Over U.S. Work," Wall Street Journal, Jul 14, 1993, A3.
- Dornheim, Michael A., "GAO, Air Force Differ on Depot Accounting," Aviation Week & Space Technology, 25 Jan 1993, 66.
- . "Uneven Playing Field Hampers Public-Private Competition," Aviation Week & Space Technology, 18 Jan 1993, pp. 50-51.
- Editorial. "Shift Depot Work to Private Industry," Aviation Week & Space Technology, 19 July 1993, 74.
- Information in a letter signed by Vic Fazio, et al to The Honorable Les Aspin, Jan 20, 1994.
- Fulghum, David A., "Air Force Proposes Industry Rescue Plan,"

- Aviation Week & Space Technology, 18 Oct 1993, pp.35-37.
- Gore, Al. Creating a Government that Works Better and Costs Less: Report of the National Performance Review. Washington D.C.: U.S. GPO, 1993.
- Grier, Peter, "Warner Robins, Inc.," Air Force Magazine, March 1993, pp. 54-57.
- Hamlin, Lieutenant Colonel Mary B., USAF. "Privatization of Aircraft Maintenance: Maximizing Contract Effectiveness." Research Report, Air War College, Maxwell AFB, AL, 1990.
- Harris, Christy, "Repair Depots on the Block," Air Force Times, May 31, 1993, 27.
- Hudson, Neff, "Depot's Fate May Hang on Maintenance-Contract Debate," Air Force Times, August 2, 1993, 24.
- Kitfield, James, "William Perry: Guarding the Base," Government Executive, August 1993, pp. 40-47.
- Klugh, James R., "Public/Private Sector Roles in Industrial Base Downsizing." Tucson, Arizona, October 26, 1993. (Address presented at the Aerospace Industries Association Conference.)
- Lee, Colonel Robert E., USAF. "Contractor versus Depot Maintenance of Weapon Systems." Research Report, Air War College, Maxwell AFB, AL., 1959.
- Morrocco, John D., "Depot Work Called No Salvation for Industry Design Teams," Aviation Week & Space Technology, Nov 1, 1993, pp. 31-32.
- "Navy Shifting Depot Work to Private Industry," Aviation Week & Space Technology, June 28, 1993, pp. 28-30.
- National Defense University, Industrial College of the Armed Forces, Industry Studies Reports, Academic Year 1992 - 1993.
- Navy Times, "Struggle in the Depots," April 5, 1993, 40.
- Office of Management and Budget, Performance of Commercial Activities, Office of Management and Budget Circular A-76. Washington D.C.: U.S. GPO, 1983.
- Office of Technology Assessment, Redesigning Defense: Planning the Transition to the Future U.S. Defense Industrial Base. Washington D.C.: U.S. GPO, 1991.

----- . Building Future Security Strategies for
Restructuring the Defense Technology and Industrial Base.
Washington D.C.: U.S. GPO, 1992.

Olsen, Alan K., Former Associate Director of Maintenance, Deputy
Chief of Staff, Logistics, HQ USAF. Personal Interview
December 21, 1993.

Plunkett, Vickie, Military Affairs Aide to Rep. Glen Browder (D-
Ala). Telecon on April 5, 1994.

Ricks, Thomas E., "Air Force's No.2 Officer Proposes Shift
of Maintenance Work to Private Sector," Wall Street
Journal, Jul 7, 1993, A4.

Rosenberg, Eric, "Navy Stops Bid to Steer Tomcat Upgrades To DoD
Depots," Defense Week, Dec 20, 1993, pp. 1, 9.

Scott, William B., "Manufacturers Embrace Upgrades to Survive in
'90s," Aviation Week and Space Technology, Jul 22, 1991,
pp. 42-48.

Smith, Robert A., III. The Development of Air Logistics Doctrine
1948 - 1956. Mobile Air Materiel Area, Brookley AFB, AL.,
1957.

Spring, Baker, "Supporting the Forces: The Industrial Base and
Defense Conversion," The Heritage Foundation Backgrounder,
October 22, 1993, pp. 1-10.

Tapscott, Mark, "Time to Prepare for Transition," Defense
Electronics, July 1992, pp. 20-21.

U.S. Air Force, Air Force White Paper, "Air Force Strategy
Provides Highest-Quality, Affordable Depot Maintenance,"
November 1993, 4.

U.S. House of Representative. Committee on Armed Services.
National Defense Authorization Act for Fiscal Year 1994.
103rd Cong., 1st sess., 1993. Conference Report to accompany
H.R. 2401.

Velocci, Anthony L., Jr. "Executives Assail Impact of Depots on
Industrial Base," Aviation Week & Space Technology, 21 June
1993, pp. 69-71.

Van Gilst, Mark. Depot Policy Staff Officer, HQ USAF, DCS
Logistics, Maintenance Policy Division. Personal Interview
February 1, 1994.

Weinschenk, Andrew, "Acquisition Reform, Depot Changes Head New
Chief's Agenda," Defense Week, 21 Mar 94, pp. 8-11.

----- . "Industry Won Half Of Pentagon Depot Competitions
Last Year," Defense Week, 18 Jan 1993, pp. 8-9.

----- . "Pentagon Maintenance Accounts Given Major Boost By
Lawmakers," Defense Week, 12 Oct 1993, 8.

----- . "Most Army and Air Force Depot Work is Kept from
Private Industry." Defense Week, 22 Mar 1993, 2.

----- . "GAO Finds More Depot Overcapacity Than Previously
Estimated." Defense Week, 10 May 1993, 13.

----- . "House Panel Won't Let Pentagon Shift Depot Work to
Defense Firms." Defense Week, 12 Jul 1993, 1.

Went, General J.J., USMC (Ret), et al., Depot Maintenance
Consolidation Study, Office of the Joint Chiefs of Staff,
Washington, D.C., 1993.

White, Justus P., "Upgrade & Modernization Lack of Policy Causes
Depot Disarray," Armed Forces Journal, December 1993, pp.28-
29.

Yates, General Ronald, "Competition Must Reign," Defense News,
24 Jan 1994, 24.